RECEIVED MAR 13 1981

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

SEMS DocID 641395

11 MAR 1981

Carroll Products
P. O. Box 66
Route 91
Wood River Junction, Rhode Island 02894

RCRA RECORDS CENTER
FACILITY Kenney Realty
I.D. NO. RID000 2042216
FILE LOC. R-8
OTHER

Gentlemen:

Subject: Radioactivity Analyses of Your Water Sample

This refers to the water sample collected from your Company during the week of December 7, 1980 by Messrs. T. Jackson and T. Thompson of this office. The analytical results indicate no unusual quantities of radioactivity were present in your water sample. Gross beta and gross alpha radioactivity analyses were performed on the sample. A gross alpha measurement consists of the total measured emission of nuclear particles consisting of two protons and two neutrons (a helium nucleus), commonly called alpha particles. Alpha particles carry a positive electric charge. A gross beta measurement consists of the total measured emission of electrons which originate in the nucleus of the atom. These particles carry a negative electric charge. The specific sample results in picocuries per liter (a picocurie is one trillionth of a Curie or 2.22 disintegrations per minute) are:

	Radioactivity	EPA Limits
gross alpha:	4 ± 1	15
gross beta :	Less than 8	50

A "less than" value indicates that the radioactivity in the sample was too low for our sensitive instrument to measure.

These results may be compared to the U. S. Environmental Protection Agency's National Interim Primary Drinking Water Regulations, published in Title 40, Code of Federal Regulations, Part 141. These regulations allow a maximum combined radium-226 and radium-228 concentration of 5 pCi/l, and a gross alpha particle activity (including radium-226 but excluding radon and uranium) of 15 pCi/l.

In addition, these regulations permit a gross alpha particle measurement as a substitute for radium-226 and radium-228 analyses provided the gross alpha particle activity does not exceed 5 pCi/l.

The concentration of beta particle activity is limited to that concentration which will not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem per year.

The gross beta regulation can be assumed to be met if the concentration of gross beta activity is less than 50 pCi/l.

Your water sample satisfies these U. S. Environmental Protection Agency criteria.

Should you have any questions concerning these results, we would be pleased to discuss them with you.

Sincerely,

James M. Allan

Boyce H. Grier
Director